

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A biopsy needle instrument for sampling bone marrow tissue, said instrument comprising:

a handle for inserting said needle into the bone marrow tissue; and

said needle further comprising a single hollow tube, configured for both cutting and receiving a bone marrow tissue sample, coupled to said handle;

said tube having (a) a tube bore defining a tissue-receiving space for the bone marrow tissue sample, (b) a substantially rigid tip, and (c) an outer wall configured to contact the bone marrow tissue, said outer wall being provided with an abrading formation comprising at least one slot cut into said outer wall, said slot having at least one sharp edge, said slot having a width of less than about 1 mm, said abrading formation extending in an axial direction along said tube to abrade the bone marrow tissue ; and thereby to allow said tip of said single hollow tube to be laterally displaced within the bone marrow tissue to facilitate retrieval of the bone marrow tissue sample.

2. (Cancelled)

3. (Currently Amended) A biopsy needle as claimed in ~~claim 2~~ claim 1, wherein two outer edges of said slot are defined by the intersection of said slot with said outer wall, and wherein both said outer edges are sharp.

4. (Currently Amended) A biopsy needle as claimed in ~~claim 2~~ claim 1, wherein said slot extends through said sampling tube between said outer wall and said bore.

5. (Currently Amended) A biopsy needle as claimed in ~~claim 2~~ claim 1, wherein said abrading formation comprises a plurality of said slots spaced circumferentially about said tube.

6. (Previously Presented) A biopsy needle as claimed in claim 5, wherein said slots of said abrading formation are spaced from said tip.

7. (Currently Amended) A biopsy needle as claimed in ~~claim 2~~ claim 1, wherein said slot extends, in an axial direction, at least 1 cm from said tip.

8. (Previously Presented) A biopsy needle as claimed in claim 1, wherein said tube further comprises a sample detacher at said tip to assist in detaching a base portion of said tissue sample from adjoining tissue.

9. (Previously Presented) A biopsy needle as claimed in claim 8, wherein said sample detacher comprises a sample detacher slot cut into a wall of said tip.

10. (Previously Presented) A biopsy needle as claimed in claim 9, wherein said sample detacher slot extends through said wall of said tip.

11. (Previously Presented) A biopsy needle as claimed in claim 9, wherein said sample detacher comprises a plurality of said sample detacher slots circumferentially about said tip.

12. (Previously Presented) A biopsy needle as claimed in claim 9, wherein said sample detacher slot has a length of between 1mm and 2mm.

13. (Previously Presented) A biopsy needle as claimed in claim 8, wherein at least a part of said sample detacher is disposed on said tube substantially opposite at least a part of said abrading formation.

14. (Previously Presented) A biopsy needle as claimed in claim 1 further comprising a stop to inhibit over-insertion of said tube into the bone marrow tissue being sampled.

15. (Previously Presented) A biopsy needle as claimed in claim 14, wherein at least a portion of said stop is integrally formed with at least a portion of said handle.

16. (Previously presented) A biopsy needle as claimed in claim 1, wherein said tube bore extends through said handle.

17. (Previously Presented) A biopsy needle as claimed in claim 16, wherein said handle is adapted for connection of a suction device to said tube bore.

18. (Previously Presented) A biopsy needle as claimed in claim 16 further comprising a coupling for coupling said biopsy needle to a motor drive for rotation of said tube.

19. (Previously Presented) A biopsy needle as claimed in claim 1 wherein said tube has a sharpened, beveled tip.

20. (Cancelled)

21. (Cancelled)

22. (Previously Presented) A biopsy needle for sampling bone marrow tissue, comprising:

a tissue sampling member comprising a sampling tube with a bore therein to receive a tissue sample;

a handle connected to said tissue sampling member for manual insertion of the biopsy needle; and

a coupling member, detachably connected to said tissue sampling member, for coupling said needle to a rotary motor drive;

whereby said needle is adapted for both manual insertion and motor-assisted insertion.

23. (Previously Presented) A biopsy needle as claimed in claim 22 wherein an outer surface of said sampling tube is in contact with the sampled tissue and wherein said motor drive rotates at least said outer surface.

24. (Previously Presented) A biopsy needle as claimed in claim 22 further comprising a stop, said stop comprising an enlargement of said sampling tube to inhibit over-insertion of said sampling tube into the sampled tissue.

25. (Previously Presented) A biopsy needle as claimed in claim 24, wherein said enlargement is disposed at a fixed distance from a tip of said sampling tube.

26. (Previously Presented) A biopsy needle as claimed in claim 24, wherein at least a portion of said stop is integrally formed with at least a portion of said handle.

27. (Previously Presented) A biopsy needle as claimed in claim 22, wherein said coupling member is separable from said needle and comprises a shaft adapted to be received by said sampling tube, a connecting portion for connecting said motor drive, and a drive portion to engage with said handle.

28. (Cancelled)

29. (Currently Amended) A biopsy needle assembly comprising:

a single elongated tubular cannula, having an axially extending lumen therethrough and having distal and proximal ends,

a cannula handle attached to the proximal end of said cannula, said cannula handle extending transversely to the axis of said cannula and having a cavity aligned with and open to the proximal end of said cannula,

a distal end of said cannula which is beveled and sharpened and in free fluid communication with the proximal end,

a recess or recesses on the outer surface of the said cannula distal end,

an expansion on the outer surface of the said cannula distal end,

an orifice in said cannula handle in fluid flow communication with said cannula lumen, said orifice being coaxial with said cannula lumen,

a stylet having a knob affixed to its proximal end, said knob sized to fit matingly within said orifice,

an elongated stylet shaft extending from said knob, slidably received within said cannula lumen,

said stylet having a sharpened distal tip which extends distally from the distal end of said cannula,

said orifice retaining said knob so that force may be rotatably applied around either axis of direction of said elongated stylet positioned in said orifice without relative rotation between elongated stylet and said elongated cannula,

a connector attachment having a knob affixed to its proximal end, said knob being sized to fit matingly within said orifice,

said connector attachment having a shaft affixed to its proximal end, said knob and shaft being sized to fit within said orifice of said cannula handle distally and said knob sized to fit an electric drill or electric screw driver proximally,

said orifice retaining said knob of said connector attachment so that force maybe rotatably applied around either axis direction of said elongated connector attachment positioned in said orifice without relative rotation between elongated connector attachment and said elongated cannula,

an electric drill or electric screw driver,

a sheath which is sized to fit around said electric drill or electric screw driver,

said sheath having an opening to receive said electric drill or said electric screw driver,

said opening having a strap or string to enclose said electric drill or said electric screw driver,

a pushrod having a knob affixed to its proximal end, said knob being sized to fit slidably within said orifice,

an elongated shaft extending from said pushrod knob, slidably received within said cannula lumen,

said pushrod having a blunt distal tip which extends distally from the distal end of said cannula.

30. (Previously Presented) A biopsy needle as claimed in claim 22 further comprising a motor drive and an insulating, sterile or sterilizable, protective sheath to substantially enclose said motor drive except for a drive shaft, whereby said motor drive

may be operated to drive said tissue sampling member while said motor drive is within said sheath.

31. (Previously Presented) A biopsy needle as claimed in claim 18, wherein said coupling is separable from said needle and comprises a shaft adapted to be received by said tube, a connecting portion for connecting said motor drive, and a drive portion to engage with said handle.